

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



Company Information

Company Name: **Marathon Oil Company**

Gas STAR Contact: **Amanda San Miguel**

Title **HES Professional**

Address: **5555 San Felipe**

City: **Houston**

State: **TX**

Zip: **77056-2723**

Phone: **(713) 296-3072**

Fax: **(713) 513-6072**

E-mail: **ALSanmiguel@marathonoil.com**

Company Information Updated: **No**

Activities Reported

BMP1: No BMP2: No BMP3: Yes

Total Methane Emission Reductions Reported This Year: **366,406**

Previous Years' Activities Reported: **No**

Period Covered by Report

From: **01/01/2010**

To: **12/31/2010**

☒ I hereby certify the accuracy of the data contained in this report.

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Texas

B. Description of PRO

Please specify the technology or practice that was implemented:

Artificial lift: gas lift (10 years)

Please describe how your company implemented this PRO:

Marathon installed an AVE (Annular Velocity Enhancer) in 3 wells. AVE is a downhole installation for long completion intervals to enhance gas lift.

C. Level of Implementation

Number of units installed: 3 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **12,618 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Engineering calculation based on casing diameter, well depth, shut-in pressure and number of annual vents.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year

☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): \$ _____

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 88,326**

\$ / Mcf used: **\$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Marathon continues to evaluate wells for artificial lift.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Oklahoma

B. Description of PRO

Please specify the technology or practice that was implemented:

Artificial lift: install plunger lifts (10 years)

Please describe how your company implemented this PRO:

Installed plunger lifts in several wells.

C. Level of Implementation

Number of units installed: 7 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **5,216 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Engineering calculation based on average production and duration and number of vents.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): \$ _____

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 36,512**

\$ / Mcf used: **\$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Marathon continues to evaluate wells for artificial lift.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Texas

B. Description of PRO

Please specify the technology or practice that was implemented:

Artificial lift: install velocity tubing strings (10 years)

Please describe how your company implemented this PRO:

Installed velocity strings in 2 wells.

C. Level of Implementation

Number of units installed: 2 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **13,139 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Engineering calculation based on casing diameter, well depth, shut-in pressure and number of annual vents.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): \$ _____

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 91,973**

\$ / Mcf used: **\$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **We continuously evaluate wells for velocity string installation and expect to have several in 2011.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Texas

B. Description of PRO

Please specify the technology or practice that was implemented:

Artificial lift: use capillary string (10 years)

Please describe how your company implemented this PRO:

Installed capillary strings in two wells.

C. Level of Implementation

Number of units installed: 2 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **6,502 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Engineering calculation based on casing diameter, well depth, shut-in pressure and number of annual vents.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year

☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): \$ _____

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 45,514**

\$ / Mcf used: **\$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **We have 2 planned for 2011 and will continue to evaluate wells for capillary string installations.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Oklahoma

B. Description of PRO

Please specify the technology or practice that was implemented:

Artificial lift: use compression (10 years)

Please describe how your company implemented this PRO:

Added compression at several wells to reduce well blowdowns.

C. Level of Implementation

Number of units installed: 6 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **12,688 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Engineering calculation based on average well production, and duration and number of vents.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year

☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): \$ _____

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 88,816**

\$ / Mcf used: **\$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Marathon continues to evaluate wells for artificial lift.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Texas, Louisiana, and Oklahoma

B. Description of PRO

Please specify the technology or practice that was implemented:

Eliminate unnecessary equipment and/or systems

Please describe how your company implemented this PRO:

Marathon optimized compression in three areas, resulting in an overall decrease in 1847 hp.

C. Level of Implementation

Number of units installed: 14 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **3,897 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Used 2.11 MCF/yr/hp as recommended in PRO Fact Sheet No. 105.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

☒ One-year

☐ Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): \$ _____

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 27,279**

\$ / Mcf used: **\$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Marathon continues to evaluate equipment needs, but there are no immediate plans for this particular equipment by 2011**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reduction (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Oklahoma

B. Description of PRO

Please specify the technology or practice that was implemented:

Install soap launcher/soap unit (10 years)

Please describe how your company implemented this PRO:

Marathon began using foamers/soap sticks to assist in well unloading, reducing venting.

C. Level of Implementation

Number of units installed: 1 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **631 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Engineering calculation based on average well production, and duration and number of vents.

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year

☒ Multi-year

If Multi-year:

- ☒ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): \$ _____

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 4,417**

\$ / Mcf used: **\$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Marathon continues to evaluate wells for artificial lift.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

North Dakota

B. Description of PRO

Please specify the technology or practice that was implemented:

Perform reduced emissions completions

Please describe how your company implemented this PRO:

Performed "green completions" - gas directly to sales line on 43 wells.

C. Level of Implementation

Number of units installed: 43 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **311,715 Mcf/year**

Basis for the emissions reduction estimate: **Actual field measurement**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

☒ One-year

☐ Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2010

Production Sector

OMB Control No. 2060-0328
Expires 07/31/2011



F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): \$ _____

G. Total Value of Gas Saved

Value of Gas Saved: **\$ 2,182,005**

\$ / Mcf used: **\$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Green completions regularly occur in ND and are expected to continue in 2011.**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * (\$)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved (\$)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2010

Production Sector

OMB Control No. 2060-0328

Expires 07/31/2011



Additional Accomplishments